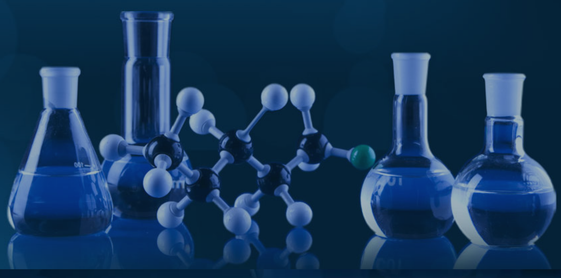

Hyperactivity

The Chemistry of Hyperactivity

Hyperactivity affects adults as well as children. Several important nutritional patterns are associated with it. Hair analysis is useful to distinguish these patterns and help guide their correction.

Calcium And Magnesium

Calcium and magnesium have a calming and relaxing effect upon the central nervous system. In most people with the symptom of hyperactivity, hair calcium and magnesium levels are out of the normal range.

We often associate hyperactivity with fast oxidation (low calcium and magnesium levels). However, more and more commonly, the symptom is occurring in slow oxidizers who have elevated levels of calcium and magnesium.

Elevated calcium and magnesium levels, indicates the condition of biounavailability. This means the minerals are not being retained in an ionized form in the blood. The minerals are precipitating in the tissues, like calcium deposits on faucets in hard water areas.

Although tissue levels are high, if the calcium and magnesium are unavailable the symptoms can be similar to low levels of calcium and magnesium. Patients often report great benefit by adding calcium and magnesium to their supplement program

Fifteen years ago, Dr. Eck did not believe it was helpful to give calcium and magnesium to slow oxidizers. Some of his early publications mention this. He preferred to mobilize their stored calcium by giving other nutrients. However, in time he found that often with elevated calcium and magnesium, it is helpful and even necessary to provide bioavailable calcium and magnesium in supplement form. Giving supplemental calcium and magnesium to slow oxidizers with hyperactivity will often improve symptoms and will not worsen the calcium and magnesium levels.

As a general rule, the more the calcium and magnesium levels deviate from normal, either above or below normal, the greater the dose of supplemental calcium and magnesium needed. Adjusting the dosage is often critical for obtaining the best results.

Zinc And Copper

Another common cause of the symptom of hyperactivity is an imbalance involving zinc and copper. Usually the zinc is low and/or the copper is elevated. Fast oxidizers often have low zinc and low copper levels. Slow oxidizers often have elevated copper, even if it is hidden. Recall that indicators for hidden copper toxicity include a low sodium/potassium ratio, a low potassium level, an elevated calcium level, mercury toxicity, or a low copper level.

Zinc has a calming effect and some consider it a calming neurotransmitter in its own right. Zinc stimulates the new brain or cortex, which modifies and reduces emotional responses.

Copper tends to stimulate the activity of the diencephalon or emotional brain. This can lead to exaggerated emotional responses. Copper stimulates the production of the biogenic amines which have a stimulating effect upon the nervous system. Copper also affects thyroid and adrenal activity.

Most fast oxidizers with hyperactivity symptoms benefit from supplemental zinc and copper. Zinc has a calming effect, while the copper is needed to help raise calcium levels. Without adequate copper, calcium is not retained in the tissues. Also, giving zinc without copper in fast oxidizers could lead to even lower copper levels, because zinc is antagonistic to copper. For these reasons, both zinc and copper are often helpful for fast oxidizers with hyperactivity symptoms.

Slow oxidizers often benefit from zinc and other nutrients that help lower excessive copper. On rare occasions, slow oxidizers are given copper for a while, when they have evidence of biounavailable copper.

Other Minerals

Many other minerals may be involved in the symptoms of hyperactivity. Chromium and manganese can help eliminate low blood sugar tendencies which can produce symptoms of hyperactivity.

All toxic metals have substantial effects upon the nervous system. They can act directly at various sites in the brain, or they interfere with vital minerals. For example, lead interferes with calcium metabolism. Cadmium interferes with zinc metabolism. Mercury toxicity is related to copper toxicity.

Diet And Hyperactivity

Modifying the diet can have very beneficial effects upon hyperactivity symptoms. Stimulants need to be avoided. This includes caffeine-containing beverages, chocolate and high-sugar foods. For those with hypoglycemic tendencies, avoidance of all simple carbohydrates, including fruit and fruit juice, may be beneficial.

Fluctuations in blood sugar due to diet can cause severe mood swings and anxiety in sensitive individuals.

Protein tends to stimulate thyroid and adrenal glands activity. This is desirable in slow oxidizers, where low glandular activity in itself can cause anxiety feelings in some individuals. Foods containing L-tryptophan such as milk products and turkey are helpful for some people with hyperactivity symptoms. Others are sensitive to dairy products and may have adverse reactions to these foods. Some protein with each meal is excellent for slow oxidizers, as it tends to enhance the oxidation rate and stabilize the blood sugar level.

Carbohydrate foods sometimes have a sedative effect. However, grains and other phytate-containing foods bind calcium, magnesium and zinc and can lead to deficiencies of these elements. Excessive carbohydrates and not enough fat or protein can contribute to hypoglycemia and precipitate symptoms. An excess of carbohydrates in a fast oxidizer can further speed up metabolism and thus worsen hyperactivity symptoms.

Excessive dietary sugars and carbohydrates in susceptible individuals can contribute to candida albicans overgrowth. This can in turn cause hyperactivity symptoms. Fats and oils in the diet tend to slow metabolism and have a leveling effect upon blood sugar.

Vitamins And Amino Acids

B-complex vitamins enhance the oxidation rate. This is often beneficial for slow oxidizers. In fast oxidizers, excessive B-complex vitamins can cause hyperactivity symptoms. Many other vitamins contribute to overall health and well-being. Amino acids in general and glutamine in particular, can help stabilize blood sugar.